

We claim:

1. A roll of tissue having a roll bulk of 16 cubic centimeters or greater per gram and a roll firmness of 8 millimeters or less.
2. The roll of tissue of claim 1 wherein the roll firmness is about 7 millimeters or less.
3. The roll of tissue of claim 1 wherein the roll firmness is about 6 millimeters or less.
4. The roll of tissue of claim 1 wherein the roll firmness is from about 4 to about 7 millimeters.
5. The roll of tissue of claim 1 wherein the roll bulk is about 17 cubic centimeters or greater per gram and the roll firmness is about 6 millimeters or less.
6. The roll of tissue of claim 1 wherein the roll bulk is from about 17 cubic centimeters per gram to about 20 cubic centimeters per gram and the roll firmness is from about 4 millimeters to about 7 millimeters.
7. A roll of tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a single sheet caliper of from about 0.02 to about 0.05 inch.
8. The roll of tissue of claim 7 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.
9. The roll of tissue of claim 7 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.
10. The roll of tissue of claim 9 wherein the single sheet caliper is from about 0.025 to about 0.040 inch.
11. A roll of tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a geometric mean stiffness of about 8 or less.

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12. The roll of tissue of claim 11 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.
  13. The roll of tissue of claim 11 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.
  14. The roll of tissue of claim 13 wherein the geometric mean stiffness is about 5 or less.
  15. The roll of tissue of claim 13 wherein the geometric mean stiffness is from about 2 to about 5.
  16. A roll of tissue having a roll bulk/roll firmness/single sheet caliper ratio of about 350 or more centimeters per gram and a geometric mean stiffness of about 8 or less.
  17. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 390 or more centimeters per gram.
  18. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 430 or more centimeters per gram.
  19. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is from about 350 to about 550 centimeters per gram.
  20. The roll of tissue of claim 19 wherein the geometric mean stiffness is from about 2 to about 5.
  21. The roll of tissue of claim 1, 7, 11 or 16 wherein the tissue has an absorbent capacity of 5 or more grams of water per gram of fiber.
  22. The roll of tissue of claim 1, 7, 11 or 16 wherein the tissue has an absorbent rate of about 4 seconds or less.
  23. A throughdried tissue sheet having an air side and a dryer side, the dryer side of the sheet having parallel discontinuous rows of machine direction dominant

flow-like regions, wherein the discontinuities in the cross-machine direction regions are cross-machine direction dominant troughs and cross-machine dominant bar-like protrusions on the air side of the tissue sheet comprising generally parallel rows of discontinuities running at an angle of from about  $0.05^\circ$  to about  $2^\circ$  to the cross-machine direction of the sheet.

sheet of claim 24 wherein the angle is from about  $0.05^\circ$  to about  $2^\circ$ .

sheet of claim 24 wherein the angle is from about  $0.05^\circ$  to about  $2^\circ$ .

- ing a throughdried tissue sheet  
ion of papermaking fibers onto  
ing the wet web to a consistent  
erring the dewatered web from  
a speed from about 10 to about  
transferring the web to a thro  
pression knuckles per square  
above the plane of the fabric, y  
form to the surface of the thro  
web, wherein the sheet side c  
ection dominant troughs which  
s to the air side of the tissue s

28. A method making a throughdried tissue sheet comprising (a) depositing an aqueous suspension of papermaking fibers onto a forming fabric to form a wet web; (b) dewatering the wet web to a consistency from about 20 to about 30 percent; (c) transferring the dewatered web from the forming fabric to a transfer fabric traveling at a speed from about 10 to about 80 percent slower than the forming fabric; (d) transferring the web to a throughdrying fabric having from about 5 to about 300 impression knuckles per square inch which are raised at least about 0.005 inch above the plane of the fabric, wherein the web is macroscopically rearranged to conform to the surface of the throughdrying fabric; and (e) throughdrying the web, wherein the throughdrying fabric has an offset seam at an angle of about 2 degrees or less relative to the cross-machine direction of the fabric.
29. The method of claim 28 wherein the offset seam angle is about 1 degree or less relative to the cross-machine direction of the sheet.
30. The method of claim 28 wherein the offset seam angle is from about 0.05 to about 1 degree relative to the cross-machine direction of the sheet.
31. The method of claim 28 wherein the offset seam angle is from about 0.1 to about 0.6 degree relative to the cross-machine direction of the sheet.
32. A method of winding a roll of tissue from a tissue sheet having a regular pattern of surface protrusions comprising oscillating the roll from side to side as the roll is being wound such that the surface protrusions of adjacent sheets within the roll are offset from each other, thereby reducing nesting and increasing the roll bulk/roll firmness ratio relative to a roll of the same sheet material wound without oscillating the roll.
33. A paper towel having a Horizontal Wicking rate of 2.0 centimeters per second  $\frac{1}{2}$  or greater.
34. The paper towel of claim 33 having a Horizontal Wicking rate of 2.3 centimeters per second  $\frac{1}{2}$  or greater.
35. The paper towel of claim 33 having a Horizontal Wicking rate of 2.5 centimeters per second  $\frac{1}{2}$  or greater.

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